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10/622,550	07/21/2003	Nicolas Chuberre	Q76543	3920

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EXAMINER
NGUYEN, TOAN D

ART UNIT	PAPER NUMBER
2416	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/622,550	CHUBERRE ET AL.
	Examiner	Art Unit	
	TOAN D. NGUYEN	2416	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2008*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 October 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
           application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 10/15/08 have been fully considered but they are not persuasive.

The applicant argues with respect to claim 1 on page 14, second paragraph that LoGalbo does not disclose determining available bandwidth, and as a result, LoGalbo neither teaches or suggests "wherein the formatting means determines whether size of a section of the IP datagram is too large for insertion in the time slots based on the predicted available bandwidth" as recited in claim 1. The examiner disagrees. LoGalbo clearly teaches on page 6, paragraph [0050] in the following passage:" When the IP packets are too big to be carried in one of the data blocks 210 of the TDMA slot (determines whether size of a section of the IP datagram is too large for insertion means), the IP packets are split into segments and are carried within multiple data blocks 210 that may span many TDMA slots 200 (insertion in the time slots based on the predicted available bandwidth means)."

The applicant argues on page 14, third paragraph that even if Motely, Ferenc, and LoGalbo were combined, there would still be no teaching of "inserting at least one section of IP datagram in of the time slots corresponding to the available bandwidth" as recited in claim 1. The examiner disagrees. The examiner refers to the same response with respect to claim 1 above.

The applicant argues on page 14, fifth paragraph that claims 2 and 8-9 are dependent upon claim 1, and are patentable over the cited references at least by virtue

of their dependency on claim 1. The examiner disagrees. Claim 1 is rejected. Therefore, dependent claims 2 and 8-9 are also rejected.

The applicant argues with respect to claim 6 on page 16, first paragraph that LoGalbo neither teaches nor suggests "wherein the formatting means determines transmission size of IP datagram section based on negative acknowledgment from said prediction means" where the prediction means is "for predicting available bandwidth" as recited in claim 6. The applicant agrees that LoGalbo teach an acknowledge requirement for a type of a service is determined by the sending device. To determine transmission size of IP datagram sections based on negative acknowledgment would have been obvious to one of ordinary skill in the art because LoGalbo clearly teach the IP packets are split into segments and are carried within multiple data blocks 210 that may span many TDMA slots 200 when the IP packets are too big to be carried in one of the data blocks 210 of the TDMA slot (page 6, paragraph [0050], lines 5-10).

The applicant argues with respect to claims 4 and 13 on page 17, second paragraph that Saidi does not teach or suggest "concatenating the IP datagram sections in order to direct the IP datagram section to an Ethernet network" as recited in claim 4. The examiner disagrees. Terho et al. in view of Motley and Saidi et al. clearly teach at col. 8, lines 32-36 (figure 8) in the following passage: "These data packets 58 are then fed to portable computer 12, which uses its data communication program to strip these data packets 58 in accordance with the data communication protocol and thus receive the incoming data stream (concatenating the IP datagram sections in order to direct the IP datagram section to an Ethernet network means)."

Claim Objections

2.   Claims 3, 9 and 14 are objected to because of the following informalities:

Claim 3, line 17, it is suggested to change "between the a number of frames" to --- between a number of frames ---.

Claim 9, line 2, it is suggested to change "stores IP datagrams" to --- stores the IP datagrams ---.

Claim 14, line 2, it is suggested to change "the IP datagram" to --- the IP datagrams ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3.   Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the band" in line 10. There is insufficient antecedent basis for this limitation in the claim. Similar problems exist in claim 3, line 10; and claim 6, line 10.

Claim 3, line 16, it is unclear as to what is meant by "an active state being assigned to the channel if a comparison between a number of frames (N frames) representing a reference pattern and the corresponding N frames of the analysis window shows a variation in frame content for at least one of the frames," The scope of the claim is, therefore, unascertainable.

Claim 3 recites the limitation "the content of active channels" in line 23. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the location of data content" in line 25. There is insufficient antecedent basis for this limitation in the claim.

Claim 3, line 27, "grouping at least one identifier of a current block, of the data content of said block, and of the location of data content within a data block to be sent" renders the claim vague since its exact meaning is ambiguous.

Claim 4 recites the limitation "the IP datagram sections" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6.   Claims 1-2, 8-9, 12 and 14-16 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Motley (US 6,721,282) in view of Ferenc et al. (US 4,962,497) further

in view of LoGalbo et al. (US 2002/0093928).

For claims 1, 12, and 14, Motley discloses telecommunication data compression

apparatus and method, which multiplexing device comprises:

a compressor (figure 1, reference 1) adapted to provide a compressed data block

representative of the various channels (col. 2, lines 41-42),

bandwidth assigned for a given transmission link being predetermined, prediction

means for predicting the available bandwidth, known as the margin, taking account of

the band occupied for the transmission of said compressed data block (figure 1,

reference 3, col. 2, line 46).

However, Motley does not expressly disclose:

formatting means for subdividing and inserting at least one section of IP

datagrams in of the time slots corresponding to the available bandwidth,

wherein the formatting means determines whether size of a section of the IP

datagram is too large for insertion in the time slots based on the predicted available

bandwidth.

In an analogous art, Ferenc et al. disclose formatting means for subdividing and

inserting at least one section of IP datagrams in of the time slots corresponding to the

available bandwidth (col. 11 lines 24-26).

One skilled in the art would have recognized the formatting means for

subdividing and inserting at least one section of IP datagrams in of the time slots

corresponding to the available bandwidth, and would have applied Ferenc et al.'s time

slot formatter 231 in Motley's multiplexer. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention to use Ferenc et al.'s building-block

architecture of a multi-node circuit-and packet-switching system into Motley's

telecommunication data compression apparatus and method with the motivation being

implement circuit and packet-switched data multiplexing (col. 11, lines 3-6).

     Furthermore, Motley in view of Ferenc et al. does not expressly disclose wherein

the formatting means determines whether size of a section of the IP datagram is too

large for insertion in the time slots based on the predicted available bandwidth. In an

analogous art, LoGalbo et al. disclose wherein the formatting means determines

whether size of a section of the IP datagram is too large for insertion in the time slots

based on the predicted available bandwidth (page 5, paragraph [0050], lines 4-8).

     One skilled in the art would have recognized the wherein the formatting means

determines whether size of a section of the IP datagram is too large for insertion in the

time slots based on the predicted available bandwidth, and would have applied LoGalbo

et al.'s TDMA slot in Motley's multiplexer. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention to use LoGalbo et al.'s slot format

and acknowledgment method for a wireless communication system into Motley's

telecommunication data compression apparatus and method with the motivation being

to split the IP packets into segments and are carried within multiple data block 210 that

may span many TDMA slots 200 (page 5, paragraph 0050], lines 6-10).

For claims 2 and 8-9, Motley discloses wherein the multiplexing device further comprises memory means for storing at least one IP datagram to prevent congestion of datagrams caused by short-term variation of the available bandwidth (col. 12, lines 60-61).

For claims 6-7 and 16, Motley discloses telecommunication data compression apparatus and method, which multiplexing device comprises:

a compressor (figure 1, reference 1) adapted to provide a compressed data block representative of the various channels (col. 2, lines 41-42),

bandwidth assigned for a given transmission link being predetermined, prediction means for predicting the available bandwidth, known as the margin, taking account of the band occupied for the transmission of said compressed data block (figure 1, reference 3, col. 2, line 46).

However, Motley does not expressly disclose:

formatting means for subdividing and inserting at least one section of IP datagrams in of the time slots corresponding to the available bandwidth,

wherein the formatting means determines whether size of a section of the IP datagram is too large for insertion in the time slots based on the predicted available bandwidth.

In an analogous art, Ferenc et al. disclose formatting means for subdividing and inserting at least one section of IP datagrams in of the time slots corresponding to the available bandwidth (col. 11 lines 24-26).

One skilled in the art would have recognized the formatting means for subdividing and inserting at least one section of IP datagrams in of the time slots corresponding to the available bandwidth, and would have applied Ferenc et al.'s time slot formatter 231 in Motley's multiplexer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use Ferenc et al.'s building-block architecture of a multi-node circuit-and packet-switching system in Motley's telecommunication data compression apparatus and method with the motivation being implement circuit and packet-switched data multiplexing (col. 11, lines 3-6).

Furthermore, Motley in view of Ferenc et al. does not expressly disclose wherein the formatting means determines transmission size of IP datagram section based on negative acknowledgment from said prediction means when the section is too large for insertion in the time slots based on the predicted available bandwidth. In an analogous art, LoGalbo et al. disclose wherein the formatting means determines transmission size of IP datagram section based on negative acknowledgment from said prediction means when the section is too large for insertion in the time slots based on the predicted available bandwidth (page 5, paragraph [0050], lines 4-8, and paragraph [0052], lines 6-3).

LoGalbo et al. disclose wherein a resizing means resizes IP datagram sections for transmission upon negative acknowledgement and adjusts output bit rate to suit the available bandwidth (page 5, paragraph [0050], lines 4-10 as set forth in claim 7); wherein the negative acknowledgment indicates that an IP datagram was not received (page 6, paragraph [0052], lines 12-18 as set forth in claim 16).

One skilled in the art would have recognized the wherein the formatting means determines transmission size of TP datagram section based on negative acknowledgment from said prediction means when the section is too large for insertion in the time slots based on the predicted available bandwidth, and would have applied LoGalbo et al.'s TDMA slot into Motley's multiplexer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use LoGalbo et al.'s slot format and acknowledgment method for a wireless communication system into Motley's telecommunication data compression apparatus and method with the motivation being to provide the confirmation bit 620 (page 6, paragraph [0052], lines 6-15).

For claim 15, Motley discloses wherein the multiplexing device further comprises a prediction unit which uses information, supplied by the compressor, of an available capacity between compressed data blocks to determine the available bandwidth (figure 1, reference 3, col. 2, line 46).

7.   Claims 4, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motley (US 6,721,282) in view of Saidi et al. (US 7,106,738) further in view of Terho et al. (US 6,507,590).

As far as understood with respect to claims 4, 13 and 17, Motley discloses telecommunication data compression apparatus and method, comprises:

data decompression means for reconstituting active and static channels from the compress data block (figure 1, col. 2, lines 41-49).

However, Motley does not expressly disclose:

deformatting means for extracting the at least one IP datagram section from a frame comprising data from a mobile telecommunication network and the at least one IP datagram section and concatenating them in order to direct the IP datagram sections to the Ethernet network. In an analogous art, Saidi et al. disclose deformatting means for extracting the at least one IP datagram section (figure 12, col. 14, lines 30-36).

One skilled in the art would have recognized the deformatting means for extracting the at least one IP datagram section, and would have applied Saidi et al.'s packet deformatter 130 in Motley's demultiplex. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Saidi et al.'s method and apparatus for high speed packet switching using train packet queuing and providing high scalability into Motley's telecommunication data compression apparatus and method with the motivation being to receive train packets via the input port 131, and extract each individual data packet that exists within the train packet, thereby restoring the data packets that were received by the packet formatters (col. 14, lines 33-36).

Furthermore, Motley in view of Saidi et al. does not expressly disclose a frame comprising data from a mobile telecommunication network and the at least one section of the IP datagrams and concatenating them in order to direct the IP datagram sections to the Ethernet network. In an analogous art, Terho et al. disclose a frame comprising data from a mobile telecommunication network and the at least one section of the IP datagrams and concatenating them in order to direct the IP datagram sections to the Ethernet network (figure 8, col. 8, lines 32-36).

One skilled in the art would have recognized the frame comprising data from a

mobile telecommunication network and the at least one section of the IP datagrams,

and would have applied Terho et al.'s frame 61 of a GSM radio telephone network in

Motley's demultiplex. Therefore, it would have been obvious to one of ordinary skill in

the art at the time of the invention, to use Terho et al.'s method of data transfer and data

interface unit into Motley's telecommunication data compression apparatus and method

with the motivation being to strip data packets 58 in accordance with data

communications protocol and thus receive the incoming data stream (col. 8, lines 32-

36).

8.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Motley

(US 6,721,282) in view of Ferenc et al. (US 4,962,497) further in view of Saidi et al. (US

7,106,738).

For claim 5, Motley discloses a multiplexing/demultiplexing system comprising:

a demultiplexing device adapted to demultiplex a compressed data block

comprising a compressed block and at least one IP datagram section, wherein the

demultiplexing device comprises:

deformatting means for extracting the IP datagram sections, and concatenating

the IP datagram sections in order to direct them to the Ethernet network; and

data decompression means for reconstituting active and static channels from the

compresses data block (col. 2 lines 41-49).

However, Motley in view of Ferenc et al. does not expressly disclose

deformatting means for extracting the IP datagram sections, and concatenating them in

order to direct the IP datagram sections to the Ethernet network. In an analogous art,

Saidi et al. disclose deformatting means for extracting the IP datagram sections, and

concatenating them in order to direct the IP datagram sections to the Ethernet network

(figure 12, col. 14 lines 30-36).

One skilled in the art would have recognized the deformatting means for

extracting the IP datagram sections, and concatenating them in order to direct the IP

datagram sections to the Ethernet network, and would have applied Saidi et al.'s packet

deformatter 130 in Motley's demultiplex. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention, to use Saidi et al.'s method and

apparatus for high speed packet switching using train packet queuing and providing

high scalability in Motley discloses telecommunication data compression apparatus and

method with the motivation being to receive train packets via the input port 131, and

extract each individual data packet that exists within the train packet, thereby restoring

the data packets that were received by the packet formatters (col. 14 lines 33-36).

Allowable Subject Matter

9.   Claims 3 and 10-11 would be allowable if rewritten or amended to overcome the

rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN D. NGUYEN whose telephone number is (571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./
Examiner, Art Unit 2416

/Chi H Pham/
Supervisory Patent Examiner, Art Unit 2416